UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,982	02/24/2004	Johan van de Groenendaal	063170.7185	4521

5073 7590 04/14/2008

BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS, TX 75201-2980

EXAMINER	
CHO, UN C	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
04/14/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail1@bakerbotts.com
glenda.orrantia@bakerbotts.com

Office Action Summary	Application No.	Applicant(s)	
	10/786,982	GROENENDAAL ET AL.	
	Examiner	Art Unit	
	UN CHO	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-7,9-15,19-24 and 28-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-7,9-15,19-24 and 28-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 – 3, 5 – 7, 9, 12 – 15, 34, 35, 38 – 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerth et al. (US 6,370,373 B1) in view of Gray et al. (US 7,295,524 B1) and further in view of Jonsson et al. (US 6,690,939 B1).

Regarding claim 1, Gerth discloses a system for tracking and managing mobile devices in a wireless network, comprising: a plurality of device agents, each device agent being assigned to collect association information from a corresponding set of access points in the wireless network (plurality of MSC connected to BS (not shown), Fig. 2, 120A – 120 G); and a device manager (PSMS; Fig. 2, 202) operable to receive the collected association information from the device agents, the device manager having a conflict resolution engine (CDS; Fig. 2, 210) for resolving conflicting access point associations; the association information from an access point comprising information identifying mobile units which are associated with the access point (receives REGNOT records from plurality of MSC whereas REGNOT includes the mobile user's MIN, time stamp and MSC identification; Gerth: Col. 3, line 62 through Col. 4, line 35).

However, Gerth as applied above does not specifically disclose collecting the association information from the corresponding set of access points by querying the access points in the corresponding set of access points, the association information from an access point comprising information identifying one or more mobile units which are associated with the access point. In an analogous art, Gray remedies the deficiencies of Gerth by disclosing such limitation wherein a wireless access point receives a request from airspace management platform (Fig. 1, element 56) to scan the wireless airspace for rogue access points and wireless clients and report back to the airspace management platform the results for analysis (Gray: Col. 8, lines 40 – 46; Col. 9, lines 5 – 31; Col. 9, lines 58 – 67 and Col. 10, lines 24 – 57). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Gray to the system of Gerth in order to provide an effective apparatuses and systems facilitating the management of wireless computer network environment and the detection of rogue and other devices that may affect the performance and/or security of the wireless computer network.

However, Gerth in view of Gray as applied above does not specifically disclose a device manager operable to receive the collected association information from the device agents, the device manager having a conflict resolution engine for resolving conflicting access point associations, the conflicting access point associations being two or more associations of one and only one of the one or more mobile units with respective two or more access

points. In an analogous art, Jonsson remedies the deficiencies of Gerth in view of Gray by disclosing such limitation in Col. 5, lines 13 – 51 wherein one and only one radio user equipment communicates with cells 1 and 2 and the base station controller knowing the overload condition of cell 1 instructs cell 1 to avoid downlink transmission, thus controlling the overloading condition. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Jonsson to the modified system of Gerth in view of Gray in order to increase the overall communication capacity of a radio communications system.

Regarding claim 2, Gerth as applied above discloses wherein the association information from the access point also comprises address information of the mobile units (mobile units MIN and ESN) which are associated with the access point; and the conflict resolution engine uses the address information to resolve conflicting access point associations to a mobile unit (Gerth: Col. 5, lines 45 – 67).

Regarding claim 3, Gerth as applied above discloses wherein the association information from the access point comprises time stamps associated with the association information; and the conflict resolution engine uses the time stamps to resolve conflicting access point associations to a mobile unit (Gerth: Col. 5, lines 45 – 67).

Regarding claim 5, Gerth as applied above discloses wherein the conflict resolution engine requests appropriate ones of the device agents to query

access points corresponding to the conflicting associations (requesting a query from MSC; Gerth: Col. 5, lines 14 – 29; Chuah: Page 3, Paragraph 0036, line 1 through Page 4, Paragraph 0037, line 6; Paragraph 0041, line 1 through Paragraph 0043, line 9 and Fig. 5).

Regarding claim 6, Gerth as applied above discloses wherein the conflict resolution engine uses network traffic statistics for a mobile device to resolve whether the device is associated with an access point (fraud manager uses traffic statistics such as by comparing the difference between the time stamps of the REGNOT; Gerth: Col. 5, lines 37 – 44).

Regarding claim 7, Gerth as applied above discloses wherein the conflict resolution engine is rule-based (Gerth: Col. 5, lines 37 – 44).

Regarding claim 9, Gerth as applied above discloses wherein the device manager sends a request to a device agent to trigger the query process of the device agent (PSMS instructs RVCD to send REGNOT records received from MSC every half hour; Gerth: Col. 5, lines 4 – 13).

Regarding claim 12, Gerth as applied above discloses wherein the association information comprises identification of disassociated mobile units (fraud manager identifies the fraudulent mobile user; Gerth: Col. 5, lines 45 – 67).

Regarding claim 13, Gerth as applied above discloses wherein the association information comprises information describing disassociation of a mobile unit from an access point (REGNOT includes MIN and ESN of the mobile user; Gerth: Col. 4, lines 19 – 46 and Col. 5, lines 45 – 67).

Regarding claims 14, 34 and 35, the claims are interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 15, the claim is interpreted and rejected for the same reason as set forth in claim 6.

Regarding claim 38, Gerth in view of Gray as applied above does not specifically disclose wherein the one and only one mobile unit is one and only one physical mobile unit. In an analogous art, Jonsson remedies the deficiencies of Gerth in view of Grey by disclosing that the mobile unit is one and only one physical mobile unit (Jonsson: Col. 5, lines 13 – 51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Jonsson to the modified system of Gerth in view of Gray in order to detect the one and only one radio user equipment communicating with cells 1 and 2 so that the base station controller knowing the overload condition of cell 1 can instruct cell 1 to avoid downlink transmission, thus controlling the overloading condition and increasing the overall communication capacity of a radio communications system.

Regarding claims 39, 40 and 41 are interpreted and rejected for the same reason as set forth in claim 38.

3. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerth in view of Gray, in view of Jonsson as applied to claim 1 above, and further in view of Iyer (US 6,904,278 B2).

Regarding claim 10, Gerth in view of Gray and further in view of Jonsson as applied above does not specifically disclose a topology service adapted to provide, through a graphical user interface, a visualization of current associations between the access points and the mobile units. In an analogous art, Iyer remedies the deficiencies of Gerth in view of Gray, in view of Jonsson by disclosing such limitation in Col. 16, lines 19 – 48 and Fig. 8 providing a GUI for visualizing of current associations between the access points and the mobile units. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Iyer to the modified system of Gerth in view of Gray and further in view of Jonsson in order to provide an effective way to combine data files related to call data in a report format, such as a graphical representation, that can be readily analyzed to permit resolution of problems in a wireless network because graphical representations are user-friendly and very easy to understand, facilitating intellectual comprehension.

Regarding claim 11, Gerth in view of Gray and in view of Jonsson as applied above does not specifically disclose wherein the visualization is associated with a subnet. In an analogous art, Iyer remedies the deficiencies of Gerth in view of Gray and in view of Jonsson by disclosing that visualization is associated with cell sites, Fig. 3 and Fig. 8; Iyer: Col. 16, lines 19 – 42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Iyer to the modified system of Gerth in view of Gray and further in view of Jonsson in order to provide

an effective way to combine data files related to call data in a report format, such as a graphical representation, that can be readily analyzed to permit resolution of problems in a wireless network because graphical representations are user-friendly and very easy to understand, facilitating intellectual comprehension.

4. Claims 19 – 24, 28 – 33, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerth in view of Gray and further in view of Lempio et al. (US 2003/0207683 A1)

Regarding claim 19, Gerth in view of Grey as applied above discloses all the limitations of claim 19 (Gerth: Col. 3, line 62 through Col. 4, line 35 and Chuah: Page 3, Paragraph 0036, line 1 through Page 4, Paragraph 0037, line 6; Paragraph 0041, line 1 through Paragraph 0043, line 9 and Fig. 5; Gray: Col. 8, lines 40 – 46; Col. 9, lines 5 – 31; Col. 9, lines 58 – 67 and Col. 10, lines 24 – 57), except providing a dynamic visualization of associations between the access points and corresponding associated wireless devices. However, in an analogous art, Lempio remedies the deficiencies of Gerth in view of Gray and in view of Jonsson by disclosing a database having mobile units association information to an Access Point, which is populated dynamically (Lempio: Page 3, Paragraph 0039, lines 1 – 19 and Fig. 5B). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Lempio to the modified system of Gerth in view of Gray in order to

provide an efficient system and method for tracking mobile unit's associations with a respective Access Point.

Regarding claim 20, Gerth as applied above discloses tracking a mobile wireless device connected to the wireless network by using the collected association information (tracking a mobile user by using REGNOT; Gerth: Col. 5, lines 45 – 67).

Regarding claim 21, Gerth as applied above discloses generating mobility information by consolidating the collected association information and resolving any conflicts in the collected information; and logging the resolved mobility information (Gerth: Col. 5, lines 45 – 67).

Regarding claim 22, Gerth as applied above discloses detecting one or more unauthorized rogue devices connected to the wireless network (fraud manager located within the CDS, Fig. 3, 304 compares different REGNOT and CDS determines whether the mobile user is a fraud; Gerth: Col. 5, lines 45 – 67).

Regarding claim 23, Gerth in view of Gray as applied above discloses detecting one or more unauthorized access points (Gray: Col. 8, lines 40 – 46; Col. 9, lines 5 – 31; Col. 9, lines 58 – 67 and Col. 10, lines 24 – 57).

Regarding claim 24, Gerth as applied above discloses detecting one or more disassociated mobile units (fraud manager identifies the fraudulent mobile user; Gerth: Col. 5, lines 45 – 67).

Regarding claims 28, 36 and 37, the claims are interpreted and rejected for the same reason as set forth in claim 19.

Regarding claim 29, Gerth as applied above discloses wherein the device manager assigns the access points to the plurality of device agents to balance a workload across the device agents (plurality of MSCs Fig. 2, 120A – 120G are connected to its corresponding RVCDs, Fig. 2, 204A, 204B); Gerth: Col. 3, line 62 through Col. 4, line 18).

Regarding claim 30, Gerth as applied above discloses wherein the device agent regularly polls the corresponding set of access points to determine changes to associations of the access points (REGNOT records are received every half hour; Gerth: Col. 5, lines 4 – 13).

Regarding claim 31, Gerth as applied above discloses wherein the device agent queries the corresponding set of access points to request association information from the access points (PSMS instructs RVCD to send REGNOT records received from MSC every half hour; Gerth: Col. 5, lines 4 – 13).

Regarding claim 32, Gerth as applied above discloses wherein the device manager consolidates the collected information and resolves any conflicts in the collected information (fraud manager within CDS collects information and resolves any conflicts in the collected information; Gerth: Col. 5, lines 45 – 67).

Regarding claim 33, Gerth as applied above discloses wherein the association information from the access point is retrieved from an association table maintained by the access point (MSC transmits a REGNOT query to the RVCD where a record is created; Gerth: Col. 4, lines 19 – 45).

5. Claims 42 – 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerth in view of Gray in view of Lempio as applied to claim 19 above, and further in view of Broyles et al. (US 7,142,868 B1).

Regarding claim 42, Gerth in view of Gray in view of Jonsson and further in view of Lempio as applied above does not specifically disclose a projected future view of the associations between the access points and the corresponding associated wireless devices. In an analogous art, Broyles remedies the deficiencies of Gerth in view of Chuah in view of Jonsson and further in view of Lempio by disclosing such limitation in Col. 5, lines 18 – 36 displaying a graphical representation of future network configuration. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Broyles to the modified system of Gerth in view of Chuah in view of Jonsson and further in view of Lempio in order to provide a system and method of predicting and displaying wireless network communication system traffic.

Regarding claims 43, 44 and 45, the claims are interpreted and rejected for the same reason as set forth in claim 42.

Response to Arguments

6. Applicant's arguments with respect to claims 1 – 3, 5 – 7, 9 – 15, 19 – 24, and 28 – 45 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to UN CHO whose telephone number is (571)272-7919. The examiner can normally be reached on M ~ F 9:00AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

/U. C./
Examiner, Art Unit 2617